

APPLICANT(S): GLUKHOVSKY, Arkady et al.  
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### AMENDMENTS TO THE CLAIMS

Please amend the following claims.

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method for calculating a temperature change in vivo, the method comprising:
  - introducing in vivo an image sensor having an image sensing module;
  - sensing the dark current noise of the image sensing module;
  - obtaining a dark current data sample according to a predetermined time schedule during at least one dark period during which the image sensor is not illuminated;
  - comparing a dark current data sample of the sensed dark current noise to a previous sample; and
  - calculating the temperature change in vivo according to the comparison; wherein the image sensor is contained within a capsule.
2. (Currently amended) A system for calculating a temperature change in vivo comprising:
  - a capsule comprising:
    - an image sensor;
    - an integrating unit; and
    - a change detector;
  - said image sensor contained within said capsule and being introduced in vivo; and
  - said integrating unit receiving dark current noise samples from the image sensor according to a predetermined time schedule during at least one dark period during which the image sensor is not illuminated, and said change detector detecting changes between said dark current noise samples and calculating the temperature change in vivo according to the changes.
3. (Cancelled)

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4. (Cancelled)
5. (Cancelled)
6. (Previously Presented) A method according to claim 1, comprising displaying the in vivo temperature.
7. (Previously Presented) A system according to claim 2, wherein communication between said integrating unit amplifies said dark current noise samples received from said image sensor by said integrating unit.
8. (Previously Presented) A system according to claim 2, wherein said image sensor and said integrating unit are controlled according to an illumination condition.
9. (Cancelled)
10. (Cancelled)
11. (Previously Presented) A system according to claim 2, wherein said image sensor senses the dark current noise during a dark period.
12. (Previously Presented) A system according to claim 2, wherein said image sensor communicates with said controller during periods when said image sensor is not illuminated.